

# energized

Volume 6

THE MONTHLY NEWSLETTER FOR ENERGY MANAGERS AND PUBLIC AFFAIRS OFFICERS

Issue 9

## Message to Energy Managers:

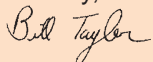
**T**he 2001 FEMP award winners were recently announced, and 16 of those honored—36 percent of total winners—represent the Navy and Marine Corps! The award ceremony will be held on 17 October in Washington, DC.

Beaufort Marine Corps Air Station, South Carolina, houses one of the Navy's most efficient Geo-exchange residential HVAC systems. The technology improves military families' living conditions, saves money, and requires less electricity.

Naval Air Station Fallon, Nevada, is aiming for energy independence through geothermal technology. DON predicts that this development will direct revenue back into its energy program, offset utility bills, reduce electric demand, prevent pollution, and create savings on direct power purchases.

Although many public utilities customers experienced heat-related blackouts during the recent Northeast heat wave, Energy Managers featured in this issue reported no problems, and cited their energy conservation practices as being responsible for their success.

Sincerely,



William F. Tayler  
Manager Utilities/Energy

## FEMP Awards Honor Navy Energy Programs

**W**hen it comes to conservation, the Department of Navy stands tall. The Navy received the lion's share for outstanding Federal sector contributions to increased energy efficiency, renewable energy, and water conservation efforts in FY 2000. Thirteen Navy and three Marine Corps nominations made the final cut.

In all, 44 Federal Energy and Water Management (FEMP) Award winners for 2001 representing a dozen agencies will be honored on 17 October at the Hotel Washington in Washington, DC. Sixteen of those honored—36 percent of total winners!—represent the Navy and Marine Corps. No other Federal agency came close.

The annual FEMP awards are the most prestigious Federal honors to Federal agencies charged with living up to or exceeding benchmarks set in the Energy Policy Act of 1992, and by executive orders dealing with energy and water efficiency and conservation.

The awards event is the Federal high water mark of Energy Efficiency Month, which occurs

each October. For the Navy, it's just a warm-up. They are to be presented a day before the annual SECNAV awards are presented at the US Navy Memorial in Washington, DC on 18 October.

SECNAV award winners will be announced in our next issue.

DON Energy Efficiency Week takes place the week after national awards ceremonies and

is marked by educational events at DON activities worldwide.

At the highest levels of the Department of the Navy, reducing pollution and shore energy infrastructure and operating costs is a major initiative—energy and utility costs make up on average nearly 40% of a CO's operating support budget. DON is committed to reducing energy bills by identifying and eliminating waste through successful energy management programs.

DON regards Energy Efficiency Month and Energy Efficiency Week as vital public and service-wide communications tools to demonstrate commitment, need, action and success in energy conservation.



*FEMP Award winners at last year's ceremony from TEAM SEMP, NWS Yorktown, Virginia*

**See page 3 for complete list of FEMP Award winners**

DON Energy Awareness Website: Access the tools on the Navy Energy website for ideas, planning tips, and tools. Set your browser to <<http://energy.navy.mil>> and scroll down the left-hand column to the Awareness pick.

# Fightertown Goes Geoexchange

**B**eaufort Marine Corps Air Station (MCAS), nicknamed Fightertown, is home to Marine Aircraft Group-31, one of the world's largest aircraft groups. It is also now home to a complex of one of the Navy's most efficient ground-source, or Geoexchange, residential heating and cooling technology systems.

The technology rewards Beaufort with improved living conditions for military families, preserved energy budget dollars and lessened electric power requirements. As a bonus, energy managers find the system results in cost savings across several budget categories, including reduced maintenance.

Covering 7,400 acres in Beaufort County, South Carolina, the Air Station includes Merritt Field, an alternate space shuttle landing site and a key training and operations facility.

## Deteriorating Systems Provide Impetus for Change

MCAS Beaufort, first commissioned in 1943, hosts seven Marine and two Navy squadrons. About 1,200 Marines and their families live in Pine Grove (a housing area at the air station) and nearby Laurel Bay. Until recently, their combined 1,236 housing units were cooled by conventional air conditioning, aging systems in need of extensive maintenance.

"In one weekend alone, we received about 45 phone calls all related to problems with the air conditioning. And that wasn't unusual. The systems were just worn out," said Neil Tisdale, utilities director for MCAS Beaufort.

"First we considered replacing the units with conventional heat pumps but the economics for Geoexchange were much better," said Bill Eisele, manager of Government Accounts & Services for South Carolina Electric & Gas. "The energy savings on this project is roughly 40 percent," he said, which translates to \$880,000 in annual energy cost savings.

## Technical and Financial Support Offered

The Air Station received technical assistance from the Naval Facilities Engineering Service Center, Southern Division Naval Facilities Engineering Command, Oak Ridge National Laboratory, South Carolina Electric & Gas and Co-Energy Group, in cost-benefit assessment. "We didn't have the money to replace the units outright, but as we explored the advantages of geothermal, we realized the energy savings would enable us to do the project," said Tisdale.

Following financial and technical fact-finding, and with support from Station Commanding Officer Colonel Bruce Hulick and Station Public Works Officer Lieutenant Commander Raymond Mardini, the Housing Department at Headquarters Marine Corps was convinced to fund a little over 50 percent of the project. South Carolina Electric & Gas and Co-Energy offered to provide financing.

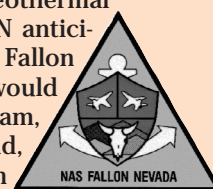
With these elements in place, the Department of Defense (DoD) awarded the contract to design and install the Geoexchange system to South Carolina Electric & Gas and its subcontractor, Co-Energy Group. Co-Energy Group previously installed and/or provides maintenance for more

# Geothermal Enthusiasm Bubbles Up in Reno

**N**aval Air Station Fallon (Nevada) is a little closer to energy independence. DON is rapidly moving forward on a plan to tap the earth to power NAS Fallon's energy needs.

The geothermal energy is available; a 7,000-foot deep test well drilled and flow tested at Fallon a few years ago recorded a temperature of 376 degrees.

Now, the idea of utilizing that geothermal energy underfoot is on a fast track. DON anticipates that geothermal development at Fallon would result in numerous benefits. It would direct revenue back into its energy program, offset utility bills, reduce electric demand, prevent pollution, and create savings on direct power purchases.



The air station currently spends about \$2 million annually on electricity. A move to geothermal energy has historically saved 25 to 35 percent on annual electric bills.

The Navy conducted a geothermal forum in Reno, Nevada in late July to bring industry, state, local and Federal officials together to hear its plan. According to Dr. Frank Monastero, Geothermal Program Office, NAWA China Lake, interest was keen among the 60 or so participants. About one-third of those represented energy companies.

DON invited geothermal development companies to prequalify for a Navy RFP, which could be issued as soon as 1 October, 2001.

The Navy is interested in attracting companies with proven technical capabilities, energy generation experience, and financial stability and expertise. The selected developer will be responsible for all phases of building and operating a geothermal electric power plant at NAS Fallon, which is located about 60 miles east of Reno.

DON hopes to award a contract for development sometime in the first quarter of 2002.

than 5,000 Geoexchange units.

MCAS Beaufort's Geoexchange system relies on 3,076 boreholes, and reduces electric demand by using the earth's constant temperature. The size of geothermal heat pumps inside each Pine Grove and Laurel Bay housing unit range from 1.5 to 3 tons depending on the square footage of the home.

Government Quality Assurance inspections are performed jointly by MCAS Beaufort Public Works Department and by The Resident Officer in Charge of Construction (ROICC).

Hundreds of individual installations are finished and according to Tisdale residents are happy with the improved comfort provided by Geoexchange. The entire project is moving ahead of the contract completion date of 15 February 2002, and may be completed by fall.

# Northeast Heat Wave

## *Navy Bends, Doesn't Break*

**C**ooling storms ripped across the Northeast on Saturday, August 10, ending a six-day heat wave that strained energy resources from Virginia to Maine. And while the heat, the deepest of the year to that point, tested grid operators, DON energy managers had barely broken a sweat by the time torrential rains came to cool things off a bit.

Energy managers at U.S. Naval Academy, Navy Region Northeast, Groton, CT, and NAS Brunswick, ME, reported no problems, saying that energy conservation infrastructure and practices at their facilities pretty much did the trick through the record-breaking heat wave. About 100,000 customers of public utilities experienced heat-related blackouts during the period.

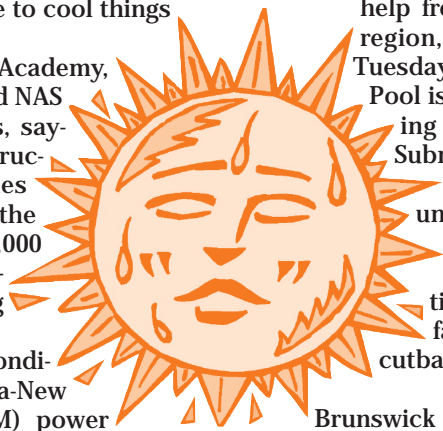
Soaring electric demand for air conditioning sent prices in the Pennsylvania-New Jersey-Maryland Interconnection (PJM) power pool to about \$250 Mw during the week. Grid operators in Maryland were among those who reduced system voltage and issued a call for conservation. According to Energy Director LT Nathan Conner, the Naval Academy responded by turning on a 160 kw generator at their central heating plant to ease Academy demand on the local grid.

The Naval Academy was named a Navy Energy Showcase in 1994, and continues a tradition of energy and water conservation practices. To date, the Naval Academy has reduced its energy consumption by 22 percent, compared to 1985.

In Groton, CT, Navy Region Northeast responded to calls for help from grid operators. As demand rose across the region, prices for wholesale electricity spiked on Tuesday to \$350 Mw. By Thursday the Northeast Power Pool issued a call to help local Groton Utilities, according to Chief Petty Officer Jack O'Neill, Naval Submarine Base New London Public Affairs. Navy Region Northeast responded by shutting down unnecessary equipment and keeping its power plant spinning to limit demand on the local grid.

According to Chief Petty Officer O'Neill, routine, successful conservation practices at the facility were enough to ensure that no changes or cutbacks were needed to help keep the lights on.

Further north, in Maine, John James of NAS Brunswick reported no problems through the heat wave. James says that few of the air station's facilities are air conditioned, so the facility's load on the local grid is not the challenge it might be elsewhere. James also points to a successful project undertaken three years ago with Central Maine Power to de-centralize its steam plant, moving to fuel-switching capability to access lowest-cost, most-available fuel at any one time.



## Navy and Marine Corps 2001 FEMP Award Winners

### Category

**Energy Efficiency/Energy Management**

**Water Conservation**

**Alternative Financing**

**Mobility/Energy Efficiency**

**Program Implementation/Management**

**Renewable Energy**

**Innovative and New Technology**

**Director's Award**

**Exceptional Service**

### Winner

Naval Surface Warfare Center Carderock

Naval Undersea Warfare Center, Keyport  
Naval Surface Warfare Center, Crane, IN

Naval Support Activity Mid-South, TN  
Naval Training Center, Great Lakes  
Euro-Med Acquisition Team, Port Hueneme

Fleet Logistics Support Squadron 57, San Diego  
USS Essex (LHD 2)  
1st Lieutenant Stacy Clark and Gunnery Sgt. Michael McGill, MCAS Yuma

Naval Surface Warfare Center, Crane

Navy Region Hawaii

Ford Island Boathouse PV Group  
Naval Base Ventura County  
Navy Region Southwest

UTC James Trockle, MCAS Iwakuni

Ron Durfey, MCAS Yuma



## Check It Out



### FYI: Upcoming Energy Conferences

Interested in learning more about energy? Check out these upcoming conferences:

**Fuel Cell Dynamics 2001:** Reality, not Hype. October 10-11, Marriott Marquis, New York, registration \$1,295., addressing vehicle, portable, and stationary fuel cells. Information: [www.alliedworld.com](http://www.alliedworld.com) or 516-624-3113.

**Energy Information Technology Conference & Expo,** October 21-23, Hyatt Regency, New Orleans. Sponsored by Edison Electric Institute and American Gas Association. Information: [www.energyitexpo.com](http://www.energyitexpo.com).

**The Business of Fuel Cells for Stationary Power,** November 27-28, Le Plaza Hotel, Brussels, Belgium. Discusses global business of fuel cells; partnerships and strategic alliances; development of markets and hydrogen infrastructure. Information: [www.eyeforfuelcells.com](http://www.eyeforfuelcells.com).

**Business Energy Solutions 2001,** November 28-29, Orlando Swan and Dolphin Hotels, Orlando, registration \$895. Designed to connect end users with energy management technologies and services. Information: The Association of Energy Engineers, [www.aeecenter.org](http://www.aeecenter.org), 770-925-9633.

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## Watts News?

**We want to hear from you.**

*Tell us about the energy initiatives you're working on, the problems you encounter, and the solutions you discover.*

Submit article ideas, comments, or questions to:

Dean Ryan Consultants & Designers, Inc.  
1733 King Street, Third Floor

Alexandria, VA 22314

Phone: (703)548-8115

Fax: 703.548-6855

e-mail: [johnc@deanryan.com](mailto:johnc@deanryan.com)

*Be sure to include your name and commercial phone number.*

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NAVY / MARINE CORPS

# ENERGY EFFICIENCY

Department of the Navy  
Commanding Officer  
NFESC  
Code: ESC 22  
1100 23rd Avenue  
Port Hueneme, CA 93043-4370